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EXAMINER

ROANE, AARON F

ART UNIT PAPER NUMBER

3739

DATE MAILED: 12/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/057,512

Applicant(s)

COURTNAGE ET AL.

Examiner

Aaron Roane

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 12 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-62 is/are pending in the application.
- 4a) Of the above claim(s) 21,22,30-48,61 and 62 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20,23-29 and 49-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2, 6-19, 23-25, 28, 29, 49-57 and 60 rejected under 35 U.S.C. 103(a) as being unpatentable over Zharov (USPN 6,443,978 B1) in view of Trine et al. (USPN 4,803,599).

Regarding claims 1, 2 and 14, Zharov discloses a therapeutic device system comprising energy emitters in the form of light emitting diodes (LEDs) (1), a power grid (the array of LEDs is connected to a power source and therefore inherently a power grid is present), and a shapable housing ("flexible substrate" 19 in figure 3), see abstract, col. 1-6 and col.7, line 38 through col. 8, line 27 and figures 1, 2 and 3. Zharov fails to disclose that the shapable housing comprises a curable material made of a thermosetting resin. Trine et al. disclose a device having light emitting diodes (LEDs) (14) and teach connecting the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device, see col. 3-10 and figures 1-8. Therefore at the time of

the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Zharov, as taught by Trine et al., to connect the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device.

Regarding claims 6 and 7, Zharov further discloses a casting material (plaster 18) within the shapable housing, see col. 8, lines 16-26 and figure 3.

Regarding Claims 8 and 9, Zharov discloses the claimed invention, see claim 4.

Regarding claim 10, Zharov further discloses the plurality of electrodes for tissue stimulation, see col. 3, lines 12-24, col. 4, lines 42-53, and claims 1 and 29.

Regarding claims 11 and 12, Zharov discloses the claimed invention. Zharov discloses a wide variety of material used for a substrate that have a wide range of thermal insulative and heat conductive properties. As Applicant has not provided any substantive parameters qualifying a material as an insulator or heat conductor, the examiner interprets these terms as broad as possible.

Regarding claim 13, Zharov discloses the claimed invention, see col. 3, lines 55-67 and claims 1, 10 and 11.

Regarding claim 15, Zharov discloses the claimed adhesive (21), see col. 8, lines 16-26 and figure 3.

Regarding claims 16 and 17, Zharov discloses the claimed invention. The custom capability of the invention disclosed by Zharov is evident in the plaster material (18) layer that uniquely conforms to an individual's knee (wherein the knee comprises a joint), this unique conformability is interpreted as a custom basis. Additionally, Zharov discloses that the device may be used to treat varicose veins, which is a vascular compromise, see abstract.

Regarding claims 18 and 19, Zharov discloses the claimed invention. The generic nature of the invention disclosed by Zharov is evident in the sock substrate (9) that many or any individual(s) may use. The joint in this case being the ankle. Additionally, Zharov discloses that the device may be used to treat varicose veins, which is a vascular compromise, see abstract.

Regarding claims 23-25 and 28, Zharov discloses the claimed invention. The power supply in the form of the battery is contained or disposed directly on the substrate (housing), see col. 3, lines 12-18. The connection between the power supply in the form of a battery and the energy emitters is inherent. Additionally, the shapable housing having an embedded power grid is also inherently disclosed.

Regarding claim 29, Zharov discloses the claimed invention. Zharov discloses a means (2) for regulating the output of the energy sources, see col. 2, lines 33-52, col. 3, lines 13-24 and figure 1.

Regarding claims 49-57, Zharov discloses the claimed invention. Zharov discloses that the device (16) treats “part of the neck and are employed to treat osteohondrosis and neuritis of the neck nerve.” Part of the neck is comprises the spinal column. Vertebrae constitute part of the neck and consist of bone. Device (17) treats the breast. See col. 7, line 62 through col. 8, line 15 and figure 2. Zharov discloses that the device or devices treat various regions of the human body (living body) and/or the entire body (see figure 8A) and therefore inherently the treatment area includes the vascular system and lymphatic system. Zharov also discloses that the device may be used to treat and is adapted to treat “inaccessible internal concavities” (e.g., the rectum) which is interpreted as soft-tissue, see col. 8, lines 57-65 and figures 6A and 6B. Zharov does disclose that the device comprises a control unit coupled to a commutation that “which provides the switching of the sources with different spectrum ranges and supplementary physiotherapeutic modules in accordance with a program given.” The examiner interprets this to mean “programmably configured.” Additionally, Zharov discloses in the abstract that the device is intended “to treat various extensive pathologies on the bioobject's surface including dermatology, cosmetology; the treatment of traumas, bruises, oedemas, varicose veins, blood therapy, treatment of infectious processes.”

Regarding claim 60, Zharov discloses a therapeutic device system comprising energy emitters in the form of light emitting diodes (LEDs) (1), a power grid (the array of LEDs is connected to a power source and therefore inherently a power grid is present), and a shapable housing ("flexible substrate" 19 in figure 3), see abstract, col. 1-6 and col.7, line 38 through col. 8, line 27 and figures 1, 2 and 3. Zharov further discloses the plurality of electrodes for tissue stimulation, see col. 3, lines 12-24, col. 4, lines 42-53, and claims 1 and 29. Zharov also discloses the method of providing therapy comprising the step of conforming to contours of the treatment area wherein the shapable housing is molded to self-retain a shape or configuration (see claim 4), activating energy sources consisting of LEDs or LEDs and TENS electrodes (see element 1 and the electrodes detailed in col. 3, lines 12-24, col. 4, lines 42-53, and claims 1 and 29) wherein the energy activation is inherent according to a therapeutic program (see col. 2, lines 33-51, col. 4, lines 54 through col. 5, lines 13 and claim 1). Zharov fails to disclose that the shapable housing comprises a curable material made of a thermosetting resin. Trine et al. disclose a device having light emitting diodes (LEDs) (14) and teach connecting the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device, see col. 3-10 and figures 1-8. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Zharov, as taught by Trine et al., to connect the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device.

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Claims 1 and 20 rejected under 35 U.S.C. 103(a) as being unpatentable over Vreman et al. (USPN 6,596,016 B1) in view of Trine et al. (USPN 4,803,599).

Regarding claim 1, Vreman et al. disclose a therapeutic device system comprising energy emitters in the form of light emitting diodes (LEDs) (44), a power grid (the array of LEDs is connected to a power source and therefore inherently a power grid is present), and a shapable housing (12), see abstract, col. 6 and 7 and figures 1A and 2. Vreman et al. fail to disclose that the shapable housing comprises a curable material made of a thermosetting resin. Trine et al. disclose a device having light emitting diodes (LEDs) (14) and teach connecting the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device, see col. 3-10 and figures 1-8. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Vreman et al., as taught by Trine et al., to connect the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device.

Regarding claim 20, Vreman et al. further disclose a device (60) fully capable of being used as a mattress pad or cushion, see figure 5.

Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Russell (USPN 6,290,713 B1) in view of Trine et al. (USPN 4,803,599).

Regarding claim 1, Russell discloses a therapeutic device system comprising energy emitters in the form of light emitting diodes (LEDs) (76), a power grid (the array of LEDs is connected to a power source and therefore inherently a power grid is present), and a shapable housing (70), see abstract, col. 12, line 35 through col. 14, line 48 and figures 6-8. Russell fails to disclose that the shapable housing comprises a curable material made of a thermosetting resin. Trine et al. disclose a device having light emitting diodes (LEDs) (14) and teach connecting the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device, see col. 3-10 and figures 1-8. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Russell, as taught by Trine et al., to connect the LEDs to the device using a thermosetting resin in order to provide a stable means of securing the LEDs to the device.

Regarding claims 2 and 3, Russell further discloses a flexible/shapable housing comprising a flexible material in the form of a metal sheet (110), see col. 14, lines 1-30 and figure 8.

Regarding claims 4 and 5, Russell in view of Trine et al. disclose the claimed invention, see col. 7-18 of Russell.

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Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zharov (USPN 6,443,978 B1) in view of Trine et al. (USPN 4,803,599) and in further view Prescott (USPN 6,454,791).

Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zharov (USPN 6,443,978 B1) in view of Trine et al. (USPN 4,803,599) as applied to claim 25 above, and further in view of Prescott (USPN 6,454,791).

Regarding claim 26, Zharov in view of Trine et al. disclose the claimed invention except for explicitly reciting that the battery is a conformable, flexible structural composition.

Prescott discloses a light therapy device comprising a conformable/flexible body (1) and teach the use of a flexible polymeric battery (26) so that it flexibly compatible with the conformable/flexible body, see col. 7, line 54 through col. 11, line 52 and figures 1 and 2.

Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Zharov in view of Trine et al., as taught by Prescott, to provide flexibility to the battery so that the battery is flexibly compatible with the conformable/flexible body or substrate.

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Zharov (USPN 6,443,978 B1) in view of Trine et al. (USPN 4,803,599) as applied to claim 27 above, and further in view of Mendes et al. (USPN 5,259,380).

Regarding claim 27, Zharov in view of Trine et al. disclose the claimed invention except for explicitly reciting that a voltage regulator is operable for uniform distribution of electrical current to the energy sources. Mendes et al. disclose a light therapy device and teach the use of a voltage regulator (52) operable for uniform distribution of electrical current to the energy sources “for the purposes of operating an analog switch,” see col. 6, lines 31-62 and figure 1. Therefore at the time of the invention it would have been obvious to one of ordinary skill in the art to modify the invention of Zharov in view of Trine et al., as taught by Mendes et al., to use a voltage regulator operable for uniform distribution of electrical current to the energy sources “for the purposes of operating an analog switch.”

Claim 58 and 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zharov (USPN 6,443,978 B1) in view of Trine et al. (USPN 4,803,599) as applied to claim 1 above, and further in view of being well known in the art.

Regarding claims 58 and 59, Zharov discloses the claimed invention except that Zharov in view of Trine et al. fail to explicitly recite that the device is “physically and programmably configured” to treat “repetitive motion trauma selected from the group consisting of carpal tunnel syndrome, sports-induced fatigue, strains, and sprains of the living body” and/or to provide “prophylactic use against conditions selected from the group consisting of repetitive stress disorders, sports-induced fatigue, strains, and sprains of the living body.” However, Zharov does show that the device is used to treat a number

of physical body regions and/parts. Zharov does disclose that the device comprises a control unit coupled to a commutation that “which provides the switching of the sources with different spectrum ranges and supplementary physiotherapeutic modules in accordance with a program given.” The examiner interprets this to mean “programmably configured.” Additionally, Zharov discloses in the abstract that the device is intended “to treat various extensive pathologies on the bioobject's surface including dermatology, cosmetology; the treatment of traumas, bruises, oedemas, varicose veins, blood therapy, treatment of infectious processes.” The device disclosed by Zharov, specifically the sock device (9), the knee device (19) and the glove device (33) could be used to treat carpal tunnel syndrome, muscle soreness and fatigue and ankle sprains. Zharov implies a sports use for the device, see col. 8, line 66 through col. 9, line 10. On the whole, the invention of Zharov is interpreted by the examiner as disclosing the physically configured and programmably configured requirements of the claimed invention. Therefore, at the time of the invention it would have been obvious to one of ordinary skill in the art to use the invention of Zharov in view of Trine et al. that is physically configured and programmably configured, as is well known in the art, to treat “repetitive motion trauma selected from the group consisting of carpal tunnel syndrome, sports-induced fatigue, strains, and sprains of the living body” and/or to provide “prophylactic use against conditions selected from the group consisting of repetitive stress disorders, sports-induced fatigue, strains, and sprains of the living body.”

***Response to Arguments***

Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection. New prior art has been provided to meet the thermosetting resin, Trine et al. (USPN 4,803,599).

In regards to Applicant's contention that all of the figures are interrelated and that the requirement of an election of a single species is an unnecessary limitation of the invention, the examiner responds by stating that figures 1 and 3 are patentably distinct and mutually exclusive from figure 4, figures 1, 3 and 4 depict only one light treatment device while figure 2 depicts a controller connectable to 4 light treatment devices. The requirement for election of species is reaffirmed and only claims 1-20, 23-29 and 49-60 have been examined.

***Response to Amendment***

The examiner acknowledges the amendments to the claims and drawings that that these amendments overcome the previously made objections.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron Roane whose telephone number is (703) 305-7377. The examiner can normally be reached on 9am - 5pm, Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Linda Dvorak can be reached on (703) 308-0994. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.R. *A.R.*  
December 13, 2004

*Roy D. Gibson*  
**ROY D. GIBSON**  
**PRIMARY EXAMINER**